

REMARKS

35 U.S.C. § 112, second paragraph

The examiner has rejected claims 1-26 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended claims 1-26 to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully request the Examiner to withdraw the rejections to claims 1-26 under 35 U.S.C. § 112, second paragraph.

Claim Objections

The Examiner has rejected claims 5-7, 10, 16-18, and 23-25 because of informalities.

Applicants have amended claims 5-7, 10, 16-18, and 23-25 in the manner suggested by the Examiner.

Applicants respectfully request the Examiner to withdraw the objections to claims 5-7, 10, 16-18, and 23-25.

Claim Rejections Under 35 U.S.C. § 103 (a)

Claims 1-10

The Examiner has rejected claims 1-10, as best as understood, under 35 U.S.C. § 103 (a) as being unpatentable over Yakshin et al. (EP 1348984, of record) in view of Montcalm et al. (US 5,958,605).

Applicants respectfully disagree with the Examiner. Applicants have amended claims 1-10. Claim 1, as amended, of Applicants' claimed invention claims a broad-angle multilayer (ML) mirror comprising a multiple layer structure over a substrate to provide uniform reflectivity over a wide range of incident angles with small phase shifts, the multiple layer structure comprising bi-layers with an extra thick layer of Molybdenum next to the substrate. See Table 1 in the specification.

Neither of the 2 references cited by the Examiner teaches an extra thick layer of Molybdenum next to the substrate. Thus, neither Yakshin et al. nor Montcalm et al. renders Applicants' invention, as claimed in claim 1, as amended, obvious to one of ordinary skill in the art of fabricating semiconductors.

Claims 2-10 are dependent on claim 1. Applicant has amended claim 1 so that the cited art does not render claim 1 obvious to one of ordinary skill in the art of semiconductors at the time that the invention was made. Thus, the cited art also would not render claims 2-10 obvious to one of ordinary skill in the art of fabricating semiconductors.

Consequently, Applicants respectfully request the Examiner to withdraw the rejections to claims 1-10 under 35 U.S.C. § 103 (a).

Claims 11-19

The Examiner has rejected claims 11-19, as best as understood, under 35 U.S.C. §103(a) as being unpatentable over Yakshin et al. (EP 1348984, of record) in view of Montcalm et al. (US5,958,605) and Mann et al. (U.S. Pub. No. 2003/0099034, of record).

Applicants respectfully disagree with the Examiner. Applicants have amended claims 11-19. Claim 11, as amended, of Applicants' claimed invention claims an optical system having an extreme ultra-violet (EUV) radiation source, the optical system comprising: a mask; a wafer; and a plurality of reflecting surfaces for imaging the mask on the wafer, wherein one or more of the plurality of reflecting surfaces includes a broad-angle multilayer (ML) mirror having a multiple layer structure over a substrate to provide uniform reflectivity over a wide range of

incident angles with small phase shifts, the broad-angle ML mirror comprising bi-layers with an extra thick layer of Molybdenum next to the substrate. See Table 1 in the specification.

None of the 3 references cited by the Examiner teaches an extra thick layer of Molybdenum next to the substrate. Thus, Yakshin et al., Montcalm et al., and Mann et al., whether individually or collectively, do not render Applicants' invention, as claimed in claim 11, as amended, obvious to one of ordinary skill in the art of fabricating semiconductors.

Claims 12-19 are dependent on claim 11. Applicant has amended claim 11 so that the cited art does not render claim 11 obvious to one of ordinary skill in the art of semiconductors at the time that the invention was made. Thus, the cited art also would not render claims 12-19 obvious to one of ordinary skill in the art of semiconductors.

Applicants respectfully request the Examiner to withdraw the rejections to claims 11-19 under 35 U.S.C. § 103 (a).

Claims 20-26

The Examiner has noted that, regarding claims 20-26, in particular, the independent claim 21, is so indefinite that it is not able to make a suitable search for the device as claimed.

Applicants respectfully disagree with the examiner. Applicants have amended claims 20-26. Claim 20, as amended, of Applicants' claimed invention claims an optical system having an extreme ultra-violet (EUV) radiation source, the system comprising: a mask; a wafer; and a plurality of reflecting surfaces for imaging the mask on the wafer, including: a broad-angle mirror having a multiple layer structure over a substrate to provide uniform reflectivity over a wide range of angles with small phase shifts, the broad-angle mirror comprising bi-layers with an extra thick layer of Molybdenum next to the substrate. See Table 1 in the specification.

Thus, Applicants have amended claims 20-26 to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants also believe that the various art cited by the Examiner do not render claims 20-26 obvious to one of ordinary skill in the art of fabricating semiconductors at the time that the invention was made.

Consequently, Applicants respectfully request the Examiner to withdraw the rejections to claims 20-26 under 35 U.S.C. § 112, second paragraph, and under 35 U.S.C. § 103 (a).

Conclusion

Applicants believe that all claims pending, including claims 1-26, are now in condition for allowance so such action is earnestly solicited at the earliest possible date.

Pursuant to 37 C.F.R. § 1.136 (a) (3), Applicants hereby request and authorize the U.S. Patent and Trademark Office to treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time.

Should there be any additional charge or fee, including extension of time fees and fees under 37 C.F.R. § 1.16 and § 1.17, please charge Deposit Account No. 50-0221.

If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact the undersigned at (408) 653-7897.

Respectfully submitted,
INTEL CORPORATION

Dated: ____April 20____, 2007

____/George Chen/____

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